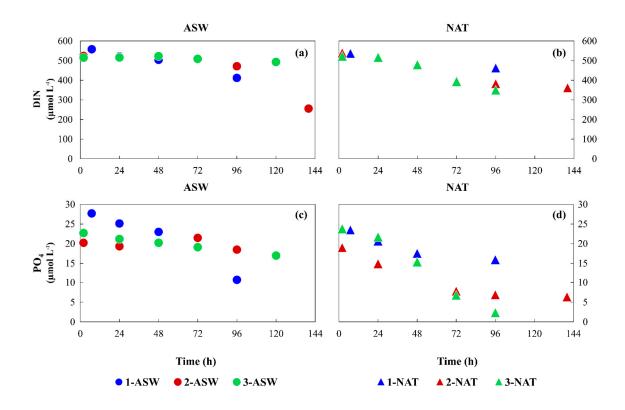
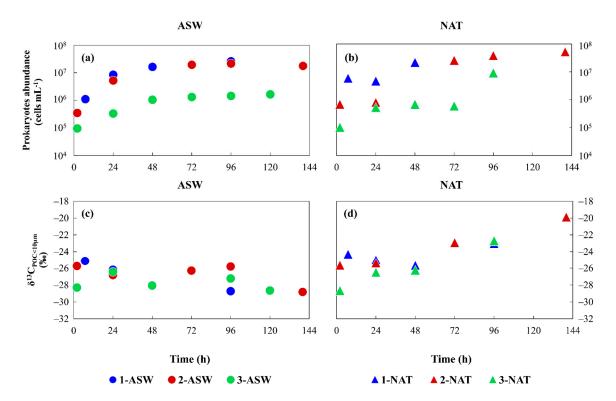
## **Supplementary Information**



**Figure S1**. Time variation of (**a**,**b**) dissolved inorganic nitrogen (DIN) and (**c**,**d**) phosphate (PO<sub>4</sub>) during the three *T. rotula* culture experiments. Circles represent the artificial seawater medium (ASW) and triangles the natural seawater medium (NAT). Blue symbols represent the first experiment (EXP-1), red the second experiment (EXP-2), green the third experiment (EXP-3).



**Figure S2.** Time variation of prokaryotes abundance (**a,b**) and isotopic composition ( $\delta^{13}$ CPOC<10µm; **c,d**) during the three *T. rotula* culture experiments of culture. Circles represent the artificial seawater medium (ASW) and triangles the natural seawater medium (NAT). Blue symbols represent the first experiment (EXP-1), red the second experiment (EXP-2), green the third experiment (EXP-3). Prokaryotes abundance is shown in a logarithmic scale.